W1 Simplified Instruction	
Function description	Choose from the relevant functions below and input
Enter the programming mode	*- 888888 - #, then you can do the programming (888888 is the default factory master code)
change the master code	0 - new code - # - repeat the new code - # (code: 6-8 digit)
Add password user	1- ID number - # - password - # (ID number is any digit between 1-2000. Password is any four digits between 0000-9999. It can add Password user continuously)
Add card user	1- Card - # (can add Cards continuously)
Delete user	2 - User ID - # 2 - Card -# (can delete Users continuously)
Exit from the programming mode	*
How do release the door	
Fingerprint User	Press password -#
Card User	Read card

6. Sound and Light indication

Operation Status	Red Light	Green Light	Buzzer
Power on	-	Bright	Short Ring
Stand by	Bright	-	-
Press keypad	-	-	Short Ring
Operation succeed	-	Bright	Short Ring
Operation fail	-	-	Three short ring
Enter into programming mode	Bright	-	Short Ring
In the programming mode	Bright	Bright	
Exit from the programming mode	Bright	-	Short Ring
Open the door	-	Bright	Short Ring
Alarm	Bright	-	Alarm

7. Technical sheet

Supply Voltage:	DC+12V±5%
Sleeping Current:	25±5mA
Working Current:	＜60Ma
Card distance:	3～8cm
Temperature:	-10～60℃
Lock output load:	20A
Alarm output load:	20A
Dimensions:	L135* W58* H26mm

8.Packing list

Name	Model no.	Quantity	Remark
Digital Keypad	W1	1	
User Manual	W1	1	
Screwdriver		1	
Pastern Stopper	Φ6mm×27 mm	4	Used for fixing
Self Tapping Screws	Φ3.5mm×27 mm	4	Used for fixing
Contact Pin		1	Used for factory default setting

Two devices interconnected Function

1. W1 work as Slave reader, connecting to Controller.

W1 support wiegand output, it can connect to the controler which supports wiegand 26 input as its salve reader. The connection diagram is as figure 1:

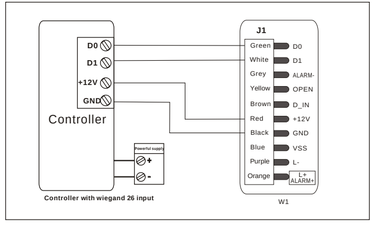


figure 1

2. W1 work as Controller, connecting slave reader

W1 supports wiegand input, any card reader which support wiegand 26 interface can connect to it as its slave reade, no matter it is ID card or IC card.The connection is showed as Figure2 . When add cards, it is required to do it at the slave reader, but not controller(except EM card, which can be added on both reader and controller).- figure 2

3. Two W1 interconnected - single door

Wiegand input, wiegand output: The connection is showed as Figure 3. One device inside the door, the other outside the door. Both devices act as the controller and reader at the same time. It has below feature:

3.1 It can add users on either of the device. The information of the two devices can be communicated. The user's capacity for the single door is maximum 4,000. Each user can use card or password for access.

3.2 Two devices alarm at the same time (except the closing door alarm), Swipe card or enter Manager password on either device can remove both of the alarm. figure 3

4. Two device interconnected & interlocked two doors

The connection is showed as Figure 4, for the two doors, each door install one controller and one lock related. The interlocked function will go when either door is opened, the other door is locked forced, only close this door, the other door can be opened.

The interlocked function is mainly using in bank, prison, and other places where require higher security. Two doors are installed for one access.

The user enters fingerprint or card on controller 1, the door 1 will open. Then enter, and close door 1, only after that, the user can open the second door by entering fingerprint or card on second controller. **figure 4**

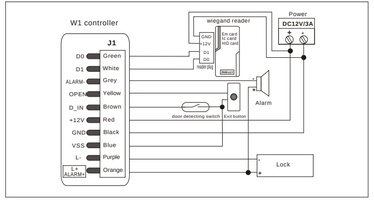


figure 2

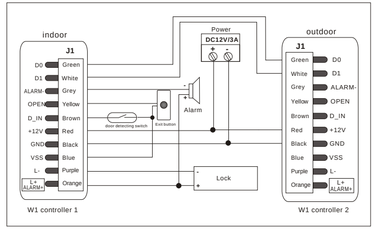


figure 3

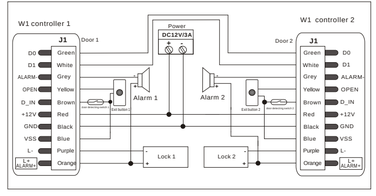
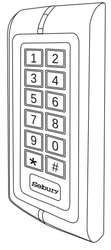


figure 4



W1

Waterproof Access Controller

User manual

1. Introduction

W1 is standalone access controller for single door.
It is in metal shell, which can be available in two kinds: silver light, matt.
W1 supports Proximity card, Password, Card+Password. Card type: 125KHZ EM card.

W1 is a high-standard waterproof device. It is suitable to be installed outdoor, and works well even in the water.

The metal shell makes it more safe, and the waterproof feature makes it more popular. 2000 users' capacity makes it suitable for not only small shops, warehouses, companies but also for banks, prisons, factories... Etc.

With wiegand 26 input and wiegand 26 output function, it can act as either controller or slave reader. Acting as controller, it is good choice for single door; acting as slave reader, it can be connected to any controller terminal which supports wiegand 26 input.

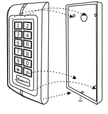
Besides, it is anti-magnetic, lock output current short protection. 12keys, keypad backlight. So many good functions make W1 an ideal choice for door access.

2. Main Feature

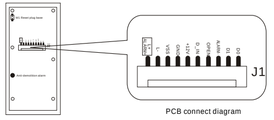
- Waterproof. Works well even put in water.
- Metal shell, anti-vandal
- Use capacity: 2000
- Wiegand 26 input, wiegand 26 output.
- Besides working standalone, it can be connected to other controller as slave reader
- Can be used as only keypad;
- Support password, card, card+password
- Very low power consumption (20mA)
- Anti-magnetic & lock output current short protect;
- So easy for connection of the lock: only 2 wires output, selecting lock type by programming menu;
- 2 pcs W1 can interconnect; 2 pcs W1 can be interlocked
- Can be connected many kinds of card readers, such as HID, Mifare and so on;
- Full of 2000 users, recognizing speed <20ms.

3. Install, wiring and fixation

3.1 Install and wire



- Open the backshell from the front cover.
- Drill 4 holes on the wall for screws and 1 hole for cable
- Fix the backshell firmly on the wall with 4 flat head screws
- Thread the cable through the cable hole, wiring, and plug and cable harness
- Attach the front cover to the backshell.



PCB connect diagram

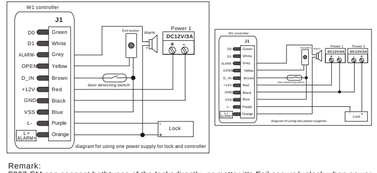
PCB connect diagram

Terminal Wire Connector Function

1	D0	Green	Wiegand output, input signal wire D0
2	D1	White	Wiegand output, input signal wire D1
3	ALARM	Grey	connecting to the negative pole of the alarm equipment
4	OPEN	Yellow	To connect to one part of Exit Button
5	D_IN	Brown	Door Contact input
6	12V	Red	(+) 12Vdc Positive Regulated Power Input
7	GND	Black	(-) Negative Regulated Power Input
8	VSS	Blue	the negative pole of the controller, connect to the other part of Exit button and door contact
9	L-	Purple	Connect to the negative pole of the Lock
10	L+/Alarm+	Orange	Connect to the positive pole of the lock and alarm equipment

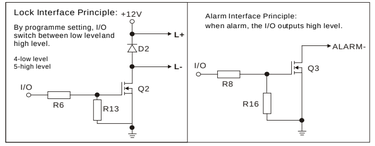
Note: do not power on until all wiring has been completed.

Connection diagram



Remark:
F007-EM can connect both types of the locks directly, no matter it's Fail secure (unlock when power on) or Fail safe (unlock when power off). Please check ManagerOperation Item 5 for the lock setting.

3.3 Intramural interface circuit



3.4 Method of Reset to Factory default setting

To reset to factory default setting, power off, open the back cover, take off the waterproof adhesive tape on the top right, you will see a 2P plug base. Then put the Contact Pin into it, power on, you will hear three beeps, it means reset to factory default setting successfully.
Power off, take out the Contact Pin, and stick the waterproof adhesive tape well.

3.5 About Anti-demolition Alarm

W1 uses LDR (light dependent resistor). If the device is open, the LDR contacts with the external light, it will alarm.

4. Manager Operation

Enter into programming mode:
* Manager Password # . Default Manager Password: 888888

Change Manager Password:
0 New Password # Repeat New Password #
The manager password must be 6~8 digit number.
Remarks: All steps below must be done after entering into programming mode.

Setting working mode:
3 0 # Valid card users only
3 1 # Valid card and password users
3 2 # Valid card or password users (factory default setting)

4.1 Valid card or password users (factory default setting)- 3 2

Remarks: in this mode, the user is valid either by card or password.
The device can be used as only keypad.

4.1.1 Add Password users

1 ID number # Password #
Remarks: ID number is any digit between 1-2000. Password is any four digits between 0000-9999.

To add password user continuously
1 ID number 1- # - Password 1- # ID number 2- # - Password 2- # ··· #

4.1.2 Add card users

Two ways to add card users
No. 1-the fast way (ID number auto generation)
1 Card # or 1 the Card Number (8 digit) #
Remark: To add more than one card, just input cards or Card number continuously

Note: when add card users, it can just enroll the card number and don't have to enroll the card itself. The card number is the 8 digit printing on the card.

In the same way, when delete card users, it can just enroll the card number to delete it and don't have to get the card if it is lost.

No.2-By user ID one by one (ID number Appointment)
1 ID number # Card # or
1 ID number # the Card Number (8digit) #
Remark: ID number can be any digit between 1-2000, but one ID to one card.
Press # means confirm. Press the last # means finish the step, Press * to exit from the step.

4.1.3 User operation

In this mode, the user can enter either by card or by password.
For card user, read card to enter in.
For Password user, press Password # to enter in.

Remarks: the Password user can change his password himself
* ID number -# Password # NewPassword # Repeat Password #

4.2 Valid Card users only. (3 0 #)

To add card users, it is the same like 4.1.2
In this mode, the user can only enter in by card.

4.3 Valid Card and Password users only. (3 1 #)

Firstly, like 4.1.2, add cards, press * to exit from the programming mode.
Then by card to set the password,
* Read card 1234 # New Password # Repeat Password #
(Password is any four digit between 0000-9999)
Now the card and password have been programmed successfully.

In this mode, the user can only enter in by Card and password.
To enter in: Read card Password #

If the user wants to change the password, he can make it himself
* Read card Password # New Password # Repeat Password #

4.4 Delete Users:

4.4.1 Delete Card users

2 Read Card # or 2 Card number #
To delete card user continuously, just input card or card number continuously.

If delete card user by ID
2 User ID #
Remarks: When delete card users, the Master can just delete its ID number and don't have to read card. It is good option if the user was left or card lost.

4.4.2 Delete Password users

2 User ID #

4.4.3 Delete card+password users

To delete card and password users, just deleting the card is OK.
To delete the card, please follow 4.4.1.

4.4.4 Delete all the users

2 0000 #
Note: this will delete all users enrolled. Before this operation, it is suggested to make sure the data is un-useful.

4.5 Lock style setting and door relay time setting

Fail secure (unlock when power on): * manager password # 4 0~10 # *
Fail safe (unlock when power off): * manager password # 5 1~10 # *

Remarks: In programming mode, press 4 is to choose Fail secure lock, 0-10 is to set door relay time 0-10 seconds; press 5 is to choose Fail safe lock, 1-10 is to set door relay time 1- 10 seconds. (Factory default setting is Fail safe lock, relay time 5 seconds.)

4.6 Setting Door open dection

6 0 # to disable this function (factory default setting)
6 1 # to enable this function
When enable this function:
a) If open the door normally, but not closed after 1 minute, the inside Siren will alarm automatically, the alarm will be off itself after 1 minute
b) If the door is opened force, or the door is opened after 20 seconds of lock released, the inside Buzzer and outside Siren will both alarm.

4.7 Setting Security Status

Normal status: 7 0 # (Factory default setting)
Lock on status: 7 1 # In 10 minutes, if there's 10 times invalid card or wrong Password, the device will lock on for 10 minutes.
Alarm status: 7 2 # In 10 minutes, if there's 10 times invalid card or wrong Password, the device will alarm.

4.8 Two devices interlock setting

8 0 # to disable this function (factory default setting)
8 1 # to enable this function

4.9 Setting Alarm signal output time

9 0~3 #
Alarm time is 0-3 minutes, factory default setting 1 minute.

4.10 Save and Exit from the programming mode.

When finished the setting, press * at last to save and exit from the programming mode.

5. User Operation

5.1 Alarm from the Alarm equipment and Buzzer built-in

To remove it: Read valid card or Manager Password- #

5.2 Alarm to close the door

To remove it: Close the door or Read valid card or Manager Password- #